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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/518,380 | 03/29/2005 | Anton Stapel | 04251 | 6817 |
| 23338 7590 07/05/2007 DENNISON, SCHULTZ & MACDONALD 1727 KING STREET SUITE 105 ALEXANDRIA, VA 22314 | | | EXAMINER HESS, MICHAEL THOMAS | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/518,380

Applicant(s)

STAPEL, ANTON

Examiner

Michael T. Hess

Art Unit

3709

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 24 is objected to because of the following informalities:
 - Claim 24, Line 2, the phrase "electrically conductive comprises copper" is missing the element that is to be electrically conductive and comprises copper. It is suggested that Applicant change the phrase to read "electrically conductive material comprises copper."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the steps of a preceding claim. Claim 29 depends from claim 1 which has been canceled in response to the First, Non-Final Office Action. Therefore, Applicant fails to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

NOTE: FOR EXAMINATION PURPOSES EXAMINER READS CLAIM 29 AS
DEPENDING FROM CLAIM 15, NOT CLAIM 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 15-30 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,317,277 to Bennett et al. (Bennett) in view of U.S. Published Application No. 2003/0098332 to Loprire (Loprire).

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In Reference to Claim 15

Bennett teaches:

A method for electrically conductive connection of at least two wires provided with an insulating lacquer, comprising the steps of:

At least partially enclosing the wires, in a region in which the wires (Ref. #s 10, 12, 14; Col. 1, Lines 29-33 and Col. 2, Lines 40-45, because Bennett is an improvement of the stated prior art of connecting enamel insulated wires, the insulation conductive members of Bennett are enamel wires, which a person having ordinary skill in the art at the time the invention was made would have recognized lacquer is one of a limited number of acceptable enamels) are to be connected (see Figs 1 and 4), in an electrically conductive material (Ref. # 18).

However, Bennett fails to teach:

Subjecting the region to ultrasound, whereby the insulating lacquer of the wires is broken away and a fixed connection is caused between the electrically conductive material and the wires, simultaneously with an electrically conductive connection between the wires.

Loprire teaches:

Subjecting the region to ultrasound ([0003] and [0010]), whereby the insulating lacquer of the wires is broken away and a fixed connection is caused between the electrically conductive material and the wires, simultaneously with an electrically conductive connection between the wires (See Moll et al, cited as relevant prior art, for

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further indication that one having ordinary skill in the art at the time the invention was made would have known the effects of how ultrasonic welding works).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted the ultrasonic welding of the Loprire in the method for electrically conductive connection of at least two wires of Bennett in order to achieve an atomic and molecular bonding of the metals together with a weld-like efficacy as explicitly taught by Loprire.

In Reference to Claim 16

A method according to claim 15, wherein a plurality of lacquered wires and at least one uninsulated conductor (see Bennett, Col. 5, Lines 62-64) are partially enclosed by the material (Bennett, Figs. 1-3).

In Reference to Claim 17

A method according to claim 15, wherein the electrically conductive material is in the form of a sleeve or a cup (Bennett, Fig. 1, Ref. # 18; Col. 2, Lines 48-49, wherein the penetrator is in the form of a brass screen).

In Reference to Claim 18

A method according to claim 15, wherein the electrically conductive material is an inherently rigid material (Bennett, Col. 3, Lines 54-65, wherein the penetrator is metallic material).

In Reference to Claim 19

A method according to claim 15, wherein the electrically conductive material is a flexible material (Bennett, Fig. 1, Ref. # 18; Col. 2, Lines 48-49).

In Reference to Claim 20

A method according to claim 19, wherein the flexible material is a mesh (Bennett, Fig. 1, Ref. # 18; Col. 2, Lines 48-49, wherein the penetrator is in the form of a brass screen).

In Reference to Claim 21

A method according to claim 15, wherein the material is at least partially connected in form-fitting manner with at least two lacquered wires (Bennett, Fig. 1; Col. 2, Lines 54-61, wherein the metallic penetrator is interwoven).

In Reference to Claim 22

A method according to claim 15, wherein the material is at least partially connected in force-fitting manner with at least two lacquered wires, and the joined wires and conductor are connected to a conductive carrier (Bennett, Figs. 2 and 3, Ref. # 16) by ultrasound welding (see Obviousness rejection of Claim 1 above).

In Reference to Claim 23

A method according to claim 156, wherein the wires comprise a conductive core of aluminum or copper (Bennett, Col. 2, Lines 41-44, wherein coated conductive members are made of aluminum or copper).

In Reference to Claim 24

A method according to claim 15, wherein the electrically conductive comprises copper (Bennett, Col. 2, Lines 49-51, wherein metallic penetrator is made of copper and zinc).

In Reference to Claim 25

A method according to claim 15, wherein at least one work tool of an ultrasound welding machine is used to apply the ultrasound (Loprire, Ref. # 10).

In Reference to Claim 26

A method according to claim 15, wherein the electrically conductive material is a sheet metal strip (Bennett, Fig. 5, Ref. # 18a, Col. 4, Lines 10-11, wherein the metallic penetrator is in the form of a strip of copper alloy).

In Reference to Claim 27

A method according to claim 26, wherein the sheet metal strip is crimped around the wires (Bennett, Col. 4, Lines 10-15, wherein the penetrator engages the conductive members).

In Reference to Claim 28

A method according to claim 15, wherein the electrically conductive material comprises a single ply or multiple ply strip material wound around the lacquered wires (Bennett, Fig. 5, Ref. # 18a, Col. 4, Lines 10-11).

In Reference to Claim 29

A method according to claim 15, wherein the electrically conductive material comprises a preformed open receptacle (Bennett, Fig. 5, Ref. # 18a).

In Reference to Claim 30

A method according to claim 29 wherein the open receptacle has a U-, circular or trapezoid-shaped cross-section (Bennett, Fig. 5, Ref. # 18a).

Response to Arguments

6. Applicant's arguments, see Remarks, Page 9-10, filed June 5, 2007, with respect to Examiner's 35 U.S.C. § 102 rejection of Claims 1, 3, 4, 6 and 8-14 have been fully considered and are persuasive. The 35 U.S.C. § 102(e) rejection of Claims 1, 3, 4, 6, and 8-14 has been withdrawn.

7. Applicant's arguments filed June 5, 2007 with respect to Examiners 35 U.S.C. § 103(a) rejection have been fully considered but they are not persuasive.

8. In response to applicant's argument that there is no teaching to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Applicant argues that neither one of the cited art, Loprire or Bennett, solely teach wrapping all of the wires together in a conductive sleeve and subjecting the wires and sleeve to ultrasonic waves. However, Examiner has shown in the 35 U.S.C. § 103(a) rejection above that when Bennett is read in view of Loprire, Applicant's complete invention is disclosed and one having ordinary skill in the art at the time the invention was made would have recognized that ultrasonic welding in Loprire would have been an adequate substitute for the heat and resistance welding of Bennett. An object of the Loprire invention is to

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provide an ultrasonic weld of a wire to a secondary metal through insulation, which provides a reasonable expectation of success for using the ultrasound of Loprire in the method of Bennett. (see ¶ Loprire, [0015]). MPEP § 2143.

9. In addition, Applicant's argument that the penetrator and heat and pressure of Bennett is not used is not used in the claimed invention is moot because a person having ordinary skill in the art at the time the invention was made would have known to exclude materials and steps of prior teachings that are not needed.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael T. Hess whose telephone number is 571-270-

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1994. The examiner can normally be reached on 6:30 AM - 5:00 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Bomberg can be reached on 571-272-4922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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THAO X. LE
PRIMARY PATENT EXAMINER